COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
South Central Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

RR Donnelley Printing Company
Lynchburg, Virginia
Permit No.: SCRO-30124

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, RR Donnelley has applied for a Title V Operating Permit for its Lynchburg facility. The Department has reviewed the application and has prepared a PROPOSED Title V Operating Permit.

Engineer/Permit Contact: _____ Date: _____

Air Permit Manager: _____ Date: _____

Regional Director: _____ Date: _____

FACILITY INFORMATION

Permittee
RR Donnelley Printing Company
4201 Murray Place
Lynchburg, VA 24501-5099

Facility
Same as Permittee

County-Plant Identification Number: 51-680-00032

SOURCE DESCRIPTION

NAICS Code: 323111 - commercial publication rotogravure printer

R. R. Donnelley Printing Company (RRD) is a commercial publication rotogravure printer. The facility prints, binds and mails catalogs, newspaper circulars and other commercial printing products. The facility has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year.

The facility is a Title V major source of SO_2, VOC and HAP (toluene). This source is located in a designated PSD area for all pollutants (9 VAC 5-20-205), and is a PSD major source (VOC). The facility has a PSD Permit issued on March 1, 2005 Permit as amended February 22, 2006 (referred to as the NSR permit).

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

On July 10, 1996, the facility was issued a permit to install rotogravure presses 508 and 509. This permit also superseded previous permits dated March 29, 1973, May 20, 1977, April 13, 1987, February 19, 1988 as amended March 14, 1991, and May 2, 1994. The July 10, 1996 permit was superseded by the February 4, 2000 permit to install presses 510 and 511. The February 4, 2001 permit was amended by the June 20, 2000 permit. The June 20, 2000 permit was superseded by the August 27, 2001 permit to add two printing units on press 507. The August 27, 2001 permit was amended on September 5, 2001, superseded on March 4, 2002, amended on July 31, 2002, and amended on August 13, 2002, superseded on February 24, 2003 as amended on May 14, 2004 and finally superseded on March 1, 2005 as amended on February

22, 2006.

The facility also had three hard chromium plating lines (one existing and one permitted on August 22, 1997) for plating the rotogravure cylinders. This permit was superseded by the February 24, 2003 (third line permitted), creating one permit document for RRD.

On April 2, 2007, a permanent shutdown agreement (9 VAC 5-20-220) was completed for units CP-1a (existing plating line), CP-2 (plating line permitted on August 22, 1997) and insignificant units (NP, methanol and MEK ink jet printers).

The emissions units at this facility are contained in the Section II.A table of the Title V permit. This table represents the current emission units at the facility as represented by RRD's application information.

The ink storage tanks T1-T5 were added to the significant unit table with this renewal. RRD took ownership of these tanks in 2002. These tanks are "affiliated operations" of the publication rotogravure affected source subject to the 40 CFR 63 Subpart KK (Printing MACT).

CP-1a and CP-2 were removed from the significant units table based on the April 2, 2007 permanent shutdown agreement between RRD and the DEQ.

EMISSIONS INVENTORY

A copy of the 2006 annual emission update is attached. Emissions are summarized in the following tables.

	2006 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO_2	PM_{10}	NO_x
Total	122.6	9.9	0.07	0.9	11.8

Pollutant	2006 Hazardous Air Pollutant Emission in Tons/Yr
Toluene (108-88-3)	122
Chromium Trioxide(1333-82-0) (CR^{+6} = 18540-29-9)	<.01
Methanol (67-56-1)	0.05

EMISSION UNIT APPLICABLE REQUIREMENTS

The following section discusses requirements for the emissions units at RRD. These requirements come from RRD's NSR permit dated March 1, 2005 as amended February 22, 2006 or applicable federal requirements. The conditions are not repeated verbatim from the permit.

Citations

The following citations denote the underlying authorities to implement the specific conditions in the NSR permit.

9 VAC 5-40-80, 9 VAC 5-50-20, 9 VAC 5-50-30, 9 VAC 5-50-40, 9 VAC 5-50-50, 9 VAC 5-50-80, 9 VAC 5-50-260, 9 VAC 5-50-410, 9 VAC 5-60-50, 9 VAC 5-60-100, 9 VAC 5-60-320, 9 VAC 5-80-1180, 9 VAC 5-80-1210

Section III of Title V Permit – Boiler B3 (47.24 MMBtu/hr)

Limitations

The boiler is fired on natural gas; however, it is permitted to burn up to 975,000 gallons of distillate oil (ASTM #1 or #2). Distillate is used only as a back-up fuel at this time. Emission limits are based on worst-case burning scenario for each pollutant. The new and modified source visible emissions limit of 20% with one 6-minute average not to exceed 30% is included. This limit does not apply during start-up, shutdown and malfunction (SSM) events.

The Keeler boiler is limited to distillate fuel oil, which by definition has a maximum of 0.5% sulfur. The hourly sulfur dioxide limit is based on the boiler operating at capacity and burning 0.5% sulfur distillate oil. Therefore, hourly monitoring is not required.

Monitoring

Periodic monitoring requires weekly checks for visible emissions. Due to the nature of the boiler (natural gas fired), the ability to move to monthly checks is provided if there are no visible emissions for 12 consecutive weeks of operation.

The boiler does not have the potential to emit in major amounts; therefore, the unit is not subject to CAM.

Recordkeeping

Unit specific recordkeeping includes natural gas and distillate oil usage and a visual observations log.

Streamlined Requirements

The boiler is an existing affected source under 40 CFR 63, Subpart DDDDD (Boiler MACT). Since the unit is an existing, large liquid-fired boiler (ability to burn distillate), only the initial notification is required. RRD completed this requirement on February 25, 2005. The Boiler MACT has no other applicable requirements and is not included either in any specific condition or as a general reference.

Section IV of Title V Permit – Boiler B1 and B2 (24.3 MMBtu/hr each)

Limitations

The boilers are existing sources, covered under 9 VAC 5 Chapter 40. The boilers are fired on natural gas; however, combusting distillate oil (ASTM #1 or #2) is allowed. Distillate is used only as a back-up fuel at this time. Emission limits are based on Rule 4-8 for existing fuel burning equipment (9 VAC 5-40-880 et seq.). The existing source visible emissions limit of 20% with one 6-minute average not to exceed 60% is included.

The two B & W boilers are existing and therefore limited by 9 VAC 5-40-900 A.1.b. Total existing capacity is 48.6 MMBtu/hr (24.3 + 24.3).

$PM = 1.0906 \times H^{-0.2594} = 1.0906 \times 48.6^{-0.2594} = 0.4$ lb/MMBtu

where H is the sum of the total heat input capacity of the two existing boilers in MMBtu/hr

The uncontrolled hourly PM emissions from the boilers has been calculated using the PM emission factor from AP42, Section 1.3, Distillate Oil Combustion, dated 9/98 to be:

$PM = 2$ lb/1000 gal X 1 gal/138,000 Btu X $10^6 = 0.014$ lb/MMBtu

Opacity monitoring will serve as the monitoring for particulate matter. Combustion of natural gas with distillate oil backup will produce minimal emissions of particulate matter. Appropriate operation and maintenance procedures along with opacity observations will assure compliance with particulate matter limits.

The two B & W boilers (B1 and B2) are existing boilers and the standard is S=2.64K, where S is the allowable sulfur dioxide expressed in pounds per hour and K=heat input at total capacity in MMBtu/hr (24.3 MMBtu/hr each). These two boilers normally burn natural gas and use distillate oil (0.5% sulfur) as a standby fuel; therefore, it is very unlikely that the allowable sulfur dioxide emission could be exceeded.

Monitoring

Periodic monitoring requires weekly checks for visible emissions. Due to the nature of the boilers (natural gas fired), the ability to move to monthly checks is provided if there are no visible emissions for 12 consecutive weeks of operation.

Each boiler does not have the potential to emit in major amounts; therefore, the units are not subject to CAM.

Recordkeeping

Unit specific recordkeeping includes natural gas and distillate oil usage and a visual observations log. The fuel usage records are required in Title V for fee purposes.

Streamlined Requirements

The boilers are existing affected sources under 40 CFR 63, Subpart DDDDD (Boiler MACT).

Since each unit is an existing, large liquid-fired boiler (ability to burn distillate), only the initial notification is required. RRD completed this requirement on February 25, 2005. The Boiler MACT has no other applicable requirements and is not included either in any specific condition or as a general reference.

Section V of Title V Permit – Rotogravure presses, proof press, wash tanks

Limitations

Carbon adsorption is required control technology. RRD currently has one large adsorption unit (SR#2-3) controls all of the equipment. The four newest presses require total permanent enclosure, defined by Condition V.A.3 of the permit. Start-up of #510 occurred on November 10, 2006. Emission limits currently in effect are Conditions V.A.5 and V.A.6, limiting emissions from all presses except #511 (not yet constructed). The language of these two conditions has been updated to reflect the installation date of press #510. Emission limits after construction of #511 are included (Conditions V.A.7 and V.A.8) since the approval to construct has not yet expired (Condition V.A.15). This expiration condition was updated to include the specific date based on completion of #510's construction. Based on the specific permitting action, some presses (505, 506, 507) have additional annual emissions limits for VOC and Toluene.

The presses and affiliated equipment are subject to 40 CFR 60 Subpart QQ (NSPS QQ) and the Printing MACT (publication rotogravure source). This MACT requires a 92% reduction in organic HAP emissions. RRD shows compliance through a monthly liquid-liquid material balance. NSPS QQ is discussed under Streamlined Requirements.

Monitoring

The requirement to develop a SSM plan (40 CFR 63 Subpart A) is included in this section. This condition was formerly in the Facility Wide Section; however, only the publication rotogravure affected source is currently subject to this requirement. The condition has been moved to the monitoring section for the presses (Condition V.B.4). The language of Condition 28 of the NSR permit includes the requirement to implement the plan. EPA has recently amended the General Provisions to require sources to develop the plans; however, the source has the latitude to take actions outside of the SSM plan. The language "and implement" has been removed from Condition V.B.4 as a reflection of EPA's change.

Opacity periodic monitoring is not being proposed for the solvent recovery unit, since VOCs (toluene) and water vapor are the only emissions from the unit.

VOC periodic monitoring is accomplished by use of liquid-liquid material balance on a monthly basis for the solvent recovery unit.

The presses are subject to the Printing MACT for toluene (VOC); therefore, the units are not subject to CAM.

Recordkeeping
The monthly liquid-liquid balances are the substantial records kept to demonstrate compliance with permit conditions, NSPS QQ and the Printing MACT.

Semi-annual reporting (Condition 34 of the NSR permit) for the Printing MACT is a reporting requirement of the permit. Monthly reports demonstrating the emissions (Condition 33 of the NSR permit) are required.

Streamlined Requirements
NSPS QQ states "no owner or operator subject to the provisions of this subpart shall cause to be discharged in the atmosphere from any affected facility VOC equal to more than 16 percent of the total mass of VOC solvent and water used at the facility during one performance averaging period." The Printing MACT states "Each publication rotogravure affected source shall limit emissions of organic HAP to no more than eight percent of the total volatile matter used each month. The emission limitation may be achieved by overall control of at least 92 percent of organic HAP used, by substitution of non-HAP materials for organic HAP, or by a combination of capture and control technologies and substitution of materials." For RRD, the VOCs emitted are HAPS (i.e., toluene). Therefore, the Printing MACT (92% control) is more restrictive than NSPS QQ (84% control) for RRD.

Condition 14 from the NSR permit is not included in this renewal permit. This condition no longer applies because press #510 start-up occurred on November 10, 2006. The notifications in Condition 37 pertaining to press #510 have been deleted. The notifications were received on March 10, 2005 (37.a), September 26, 2006 (37.b and d.) and November 16, 2006 (37.c). Condition 29 has been modified to delete the test required on start-up of #510. The test was completed for the month of January 2007.

Section VI of Title V Permit – CHROMIUM ELECTRO PLATING
Limitations
A composite mesh pad is the control technology used to meet 40 CFR 63 Subpart N (Chrome MACT). CP-1b is subject to the new affected source limit represented in Condition 22 of the NSR permit. CP-2, also a new affected source, was originally permitted August 2, 1997. This permit was eventually superseded during installation of CP-1b (February 24, 2003) which required the removal of the existing line (CP-1a). CP-1a and CP-2 were permanently shutdown in an agreement between the DEQ and RRD on April 2, 2007. CP-1b is the remaining line subject to the Chrome MACT.

Monitoring
The monitoring that is required is specified in 40 CFR 63.343(c)(1) and 40 CFR 63.342(f)(2) Table 2 and are included in the permit. The Chrome MACT does not contain opacity or visible

emissions standards. Therefore, visible emissions evaluations are not proposed in the Title V permit.

CP-1b does not have the potential to emit in major amounts; therefore, the unit is not subject to CAM. CP-1a and CP-2 have been permanently shutdown.

Recordkeeping
Records are kept to demonstrate compliance with the emissions limit in Condition VI.A.2, including records of pressure drop for the mesh pad and maintenance performed.

Summary reports for the Chrome MACT (Condition 35 of the NSR permit) are a reporting requirement of the permit.

Streamlined Requirements
On April 2, 2007, RRD and the DEQ completed a mutual shutdown agreement for CP-1a and CP-2. As such, conditions, or parts thereof, pertaining to CP-1a (Condition 12 of NSR permit) and CP-2 (Condition 7 and 22 of the NSR permit) are not included in this permit renewal.

Condition 40 of the NSR permit is not included as construction of CP-1b has been completed. The required stack test in Condition 30 was completed on September 13, 2005. The notifications were received on March 15, 2005 (37.e), May 4, 2005 (37.f) and July 20, 2005 (37.g).

Section VII of Title V Permit – STORAGE TANKS
Limitations
There are no limitations specific to the storage tanks.

Monitoring
None associated with the tanks.

Recordkeeping
All tanks listed in this section are required to have records showing capacity for applicability of 40 CFR 60 Subpart Kb.

Streamlined Requirements
None

Section VIII of Title V Permit – Facility Wide Conditions
Limitations
The opacity limitations for existing and new and modified sources are included in this section.

Monitoring

None

Recordkeeping
None

Streamlined Requirements
None

GENERAL CONDITIONS
The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

FUTURE APPLICABLE REQUIREMENTS
None identified.

INAPPLICABLE REQUIREMENTS
The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A.3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources (Boilers B1 and B2) at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

The engines currently at RRD are not subject to 40 CFR 63 Subpart ZZZZ, Stationary RICE MACT. Their rating is less than the 500 bhp (output) currently required in the RICE MACT. However, EPA has proposed amendments to this MACT which may affect applicability. For this reason the MACT is not included in the Inapplicable Requirements section.

Former Condition VI.D.2.g has been removed. RRD no longer has an existing affected source requiring the monitoring of rectifier capacity. As such, reporting the rectifier capacity expended is no longer applicable.

INSIGNIFICANT EMISSION UNITS
Storage tanks T1-T5 were moved to the Significant Units table with this renewal. The nickel plating system (NP) and the methanol- and MEK-based ink jet printers were removed after the permanent shutdown agreement was completed on April 2, 2007.

The insignificant emission units (as shown in Section I.B of the permit) are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption,

no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

CONFIDENTIAL INFORMATION
None

PUBLIC PARTICIPATION
The DRAFT permit was placed on public notice in Lynchburg's *The News&Advance* on May 16, 2007. The public comment period ended on June 15, 2007. No comments were received.